

WHAT IS CLAIMED IS:

1                   1. A biopsy localization device comprising:  
2                   a bioabsorbable element in a pre-delivery state prior to its delivery to a soft  
3                   tissue biopsy site of a patient; and  
4                   said bioabsorbable element being of a material which is in a post-delivery  
5                   state at the biopsy site, the bioabsorbable element being palpably harder than the  
6                   surrounding soft tissue at the biopsy site when in the post-delivery state.

1                   2. The device according to claim 1 further comprising a delivery  
2                   device for delivering the bioabsorbable element in the predelivery state to a soft tissue  
3                   biopsy site.

1                   3. The device according to claim 1 wherein the bioabsorbable element  
2                   is of a different hardness in the post-delivery state as in the pre-delivery state.

1                   4. The device according to claim 1 wherein the bioabsorbable element  
2                   has a hardness of at least about 1.5 times as hard as breast tissue in the post-delivery state.

1                   5. The device according to claim 1 wherein the bioabsorbable element  
2                   swells about 50 to 1500 percent from the pre-delivery state to the post-delivery state when  
3                   placed in contact with an aqueous liquid.

1                   6. The device according to claim 1 wherein the bioabsorbable element  
2                   has a first shape in the pre-delivery state and a second shape in the post-delivery state.

1                   7. The device according to claim 1 wherein the bioabsorbable element  
2                   has one consistency in the pre-delivery state and a different consistency in the post-  
3                   delivery state.

1                   8. The device according to claim 1 wherein the bioabsorbable element  
2                   has a longest dimension of at least about 0.5cm when in the post-delivery state.

1                   9. The device according to claim 1 wherein the bioabsorbable element  
2                   made of collagen.

1                   10. The device according to claim 1 wherein the bioabsorbable element  
2                   comprises a therapeutic agent.

1           11. The device according to claim 10 wherein the therapeutic agent  
2 comprises at least a chosen one of a chemotherapeutic agent, a radiation agent and a gene  
3 therapy agent.

1           12. The device according to claim 1 wherein the bioabsorbable element  
2 comprises reservoir means for subsequently receiving a therapeutic agent.

1           13. The device according to claim 12 wherein the reservoir means  
2 comprises reservoir means for receiving a chemotherapy agent.

1           14. The device according to claim 1 wherein the bioabsorbable element  
2 comprises a hemostatic agent.

1           15. The device according to claim 1 wherein the bioabsorbable element  
2 comprises at least one of the following materials: polyactic and polyglycolic acids,  
3 polyorthoesters, resorbable silicones and urethanes, lipids, collagens, polysaccharides,  
4 starches, ceramics, polyamino acids, proteins, hydrogels and other gels, gelatins,  
5 polymers and cellulose .

1           16. The device according to claim 1 wherein the bioabsorbable element  
2 changes from the pre-delivery state to the post-delivery state upon contact with an  
3 aqueous environment.

1           17. The device according to claim 1 wherein the bioabsorbable element  
2 is physically different in its pre-delivery state than in its post-delivery state.

1           18. The device according to claim 1 wherein the bioabsorbable element  
2 comprises a bioabsorbable filament.

1           19. The device according to claim 1 further comprising a marker  
2 element located generally centrally within the bioabsorbable element.

1           20. The device according to claim 19 wherein the marker element is a  
2 radiopaque marker element.

1           21. The device according to claim 19 wherein said marker element  
2 comprises a chosen one of a permanent marker element and a temporary marker element.

1           22. A biopsy localization method comprising:  
2           taking a tissue sample from a biopsy site within a patient;  
3           positioning a bioabsorbable element at the biopsy site at the time of the  
4 taking of the tissue sample;  
5           testing the tissue sample; and  
6           if the testing indicates a need to do so relocating the biopsy site by finding  
7 the bioabsorbable element.

1           23. The method according to claim 22 wherein the positioning step is  
2 carried out using said bioabsorbable element and a radiopaque marker.

1           24. The method according to claim 23 wherein the relocating step is  
2 carried out using a radiographic technique.

1           25. The method according to claim 23 wherein the positioning step is  
2 carried out using a chosen one of a permanent radiopaque marker and a temporary  
3 radiopaque marker.

1           26. The method according to claim 22 wherein the relocating step is  
2 carried out by at least one of:  
3           palpation of the patient to feel the bioabsorbable element;  
4           locating inflammation at the biopsy site caused by the bioabsorbable  
5 element;  
6           following a bioabsorbable thread, the thread extending from the patient's  
7 skin to the bioabsorbable element; and  
8           remotely visualizing the bioabsorbable element.

1           27. The method according to claim 26 wherein the remotely  
2 visualizing step is carried out by at least a chosen one of ultrasound, MRI and  
3 mammography.

1           28. The method according to claim 22 wherein the tissue sample taking  
2 step is carried out using a needle biopsy technique.

1           29. The method according to claim 22 wherein the tissue sample taking  
2 step is carried out using a surgical excisional biopsy technique.

1                   30. The method according to claim 22 wherein the tissue sample taking  
2 step is carried out within a soft tissue.

1                   31. The method according to claim 22 further comprising the step of  
2 selecting the bioabsorbable element so that after positioning at the target site, the  
3 bioabsorbable element has a hardness of at least about 1.5 times as hard as the  
4 surrounding tissue.

1                   32. The method according to claim 22 further comprising selecting a  
2 hemostatic bioabsorbable element and providing hemostasis at the target site by the  
3 hemostatic bioabsorbable element.

1                   33. The method according to claim 32 wherein the hemostasis  
2 providing step is provided by at least one of mechanical or chemical hemostatic  
3 techniques.

1                   34. The method according to claim 32 further comprising the step of  
2 effectively preventing blood from contacting the hemostatic bioabsorbable element until  
3 the hemostatic bioabsorbable element is positioned at the target site.

1                   35. The method according to claim 34 wherein the effectively  
2 preventing step is carried out using a hemostatic bioabsorbable element having a non-  
3 hemostatic degradable outer layer so the hemostasis providing step is a time-delayed  
4 hemostasis providing step.

1                   36. The method according to claim 34 wherein the effectively  
2 preventing step includes the step of physically isolating the hemostatic bioabsorbable  
3 element from contact with blood until it is at the biopsy site.

1                   37. The method according to claim 22 wherein the bioabsorbable  
2 element positioning step is carried out by at least one of:  
3                   injecting a flowable bioabsorbable element through a hollow member;  
4                   pushing a nonflowable bioabsorbable element through a hollow member;  
5                   and  
6                   guiding a solid bioabsorbable element to the target site.

1                   38.     The method according to claim 37 wherein the flowable  
2     bioabsorbable element injecting step is carried out using a biopsy needle.

1                   39.     The method according to claim 22 further comprising the step of  
2     changing the bioabsorbable element from a pre-delivery state prior to the positioning step  
3     to a post-delivery state after the positioning step.

1                   40.     The method according to claim 39 wherein the changing step is  
2     carried out by at least one of the following: hydration, changing temperature, electrical  
3     stimulation, magnetic stimulation, chemical reaction with a first additional material,  
4     physical interaction with a second additional material, ionization, absorption and  
5     adsorption.

1                   41.     The method according to claim 27 further comprising the step of  
2     placing a marker element at a generally central location within the bioabsorbable element  
3     at the target site.

1                   42.     The method according to claim 41 wherein the placing step takes  
2     place simultaneously with the positioning step.

1                   43.     The method according to claim 41 wherein the placing step is  
2     carried out using a radiopaque marker element.

1                   44.     The method according to claim 41 wherein the biopsy site  
2     relocating step comprises the step of remotely visualizing the marker element.

1                   45.     A medical treatment method comprising:  
2         taking a tissue sample from a biopsy site within a patient;  
3         positioning a bioabsorbable element at the biopsy site at the time of the  
4     taking of the tissue sample;  
5         testing the tissue sample;  
6         if the testing indicates a need to do so, and medically treating the biopsy  
7     site.

1                   46.     The method according to claim 45 wherein the medically treating  
2     step comprises activating an agent carried by the bioabsorbable element.

1           47. The method according to claim 46 wherein the activating step is  
2 carried out by at least one of:

3                 injecting a radiation-emitting element at the vicinity of the target site;  
4                 externally irradiating the target site; and  
5                 providing a triggering substance to the agent.

1           48. The method according to claim 45 wherein the medically treating  
2 step comprises delivering a therapeutic agent to the target site.

1           49. The method according to claim 48 wherein the delivering step is  
2 carried out using at least one of:

3                 a chemotherapy agent;  
4                 a radiation-emitting element;  
5                 thermal energy;  
6                 ionization energy;  
7                 gene therapy;  
8                 vector therapy;  
9                 electrical therapy;  
10                 vibrational therapy; and  
11                 anti-angiogenesis.

1           50. The method according to claim 45 further comprising the step of  
2 relocating the biopsy by finding the bioabsorbable element.

1           51. The method according to claim 50 wherein the relocating step is  
2 carried out prior to the medically treating step.

1           52. The method according to claim 51 wherein the medical treating  
2 step comprises removal of tissue.

*Add E.L*